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## Research Bulletin

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### IBM—What Went Wrong? From THINK to Unthinkable

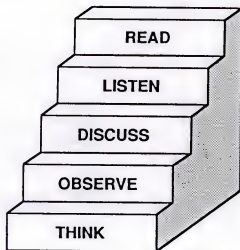
Thomas J. Watson Jr., in his autobiography *Father Son & Co.*, points out that the old IBM School House in Endicott, NY had the motto THINK over the door in two-foot-high brass letters. On the granite staircase inside the building the words THINK, OBSERVE, DISCUSS, LISTEN, READ were engraved on the risers. In other words, the admonition to all IBM salesmen and future executives was to be informed and learn.

For all the fun cartoonists had with the THINK signs that once flourished in the offices of IBM and its customers, the advice conveyed by these words is a good foundation for running a business enterprise. In fact, a good argument can be made that the beginnings of IBM's fall from grace among its customers, employees and stockholders coincided with the mysterious disappearance of the THINK signs in the late 1970s. IBM corporate executives seemed to stop thinking, observing, discussing, listening and reading about anything that did not agree with their particular view of the world.

For example, while conducting research on office automation and white collar productivity in the early 1980s, INPUT obtained the following information from an IBM employee:

Exhibit 1

#### Steps in the Learning Process



Source: INPUT

- When asked about the viability of PROFS (IBM's mainframe-oriented Professional Office Systems) after the announcement of the PC, he stated: "We (IBM) have made a lot of money on big mainframes for a long time and there are those around here who think it can go on forever."

- Then, when asked about the future impact of optical storage on magnetic media in office systems, he quoted the then Corporate Vice President of Programming and Technology as stating: "I will believe it when I see it, and when I see it, we (IBM) will take it away from them."

The combination of an obsession with large, complex, mainframe technology and the confidence that IBM could control the release and acceptance of new technologies made it unthinkable that IBM could fail. This management mind-set developed because of IBM's long history of "account control" in the commercial data processing industry, and it was re-enforced by the ability to bury individual product and management mistakes in the overall "success" of its corporate plan.

Why THINK about past mistakes and technological change when everything you do turns out so well?

Why OBSERVE what is going on in the real world when the corporate plan is being met?

Why DISCUSS conflicting opinions with employees or customers when the only opinion that counts is that of corporate management?

Why LISTEN to technical arguments and customers complaints about over-priced hardware-software technology when it is still selling and highly profitable?

Why READ critical reports as long as the company is recognized as being the most successful and best managed in the world?

The answer is to learn from your mistakes and avoid the unthinkable—the fact that you just might be wrong.

Here is what IBM might have learned over the years if it had focused on what was carved in granite on the steps at the IBM School House in Endicott.

## Step One—THINK

Thirty years ago, IBM research revealed that its customers overwhelmingly felt "ease of use" was the most important attribute for systems software. It seems obvious that IBM didn't THINK very much about its customers' opinions before it proceeded to develop the most complex set of systems software the world has ever seen. From IBM's perception its operating systems strategy (from OS/360 to MVS) was successful because it drove the demand for large mainframe computers.

The fact that IBM's "temporary solution" for smaller mainframe customers (from DOS to VSE) resulted in a thirty years' war, which IBM never won, was minimized because IBM "made a lot of money on large mainframes", regardless of the additional expense of maintaining several operating systems.

If the IBMers responsible for the decision to contract with Microsoft for the development of PC DOS had had THINK signs on their desks, perhaps they would have realized the difficulty they would have once millions of copies were installed.

## Step Two —OBSERVE

After the creation of the systems software monster, it would have been wise to OBSERVE that a high percentage of large mainframe systems development projects (some reputable sources say as high as 70%) are either never completed, or if completed, are never used. And it can also be easily observed that a similarly high percentage of the IS department's time is spent maintaining existing applications so they can "take advantage" of new, increasingly complex systems software. It would have been obvious the systems software tools were part of the IS departments' productivity problem and that user management would become frustrated with the unresponsiveness of the IBM-IS coalition.

## Step Three—DISCUSS

Then, after selling its customers (and much of the data processing world) on its Systems Network Architecture (SNA), IBM might have seen fit to at least DISCUSS the possibility that it didn't make much sense to route electronic mail thousands of miles through a mainframe when two minicomputers (or workstations) were located practically next door to each other. Discussion with SNA critics would also have revealed that major SNA components such as 37XX communications controllers and 3790/8100 cluster controllers lacked acceptable price-performance from the beginning, and could only get worse with the rapid advance of microprocessor technology.

IBM did not want to discuss the orderly distribution of processing from mainframes because it was unthinkable that IBM customers would eventually revolt against a distributed processing strategy that did not distribute processing; and that this revolution would bring down the good, the bad, and IBM.

## Step Four—LISTEN

Years later, when IBM announced its Systems Application Architecture (SAA), which was actually designed for "cooperative processing", President John Akers stated that the company had been "hit in the head" by its customers. This was because IBM didn't LISTEN to its customers shouting and screaming about mainframe hardware-software complexity, expense, and confusion for years before. Even the most loyal IBM customer, caught in the mainframe trap, was forced to recognize their predicament and voice displeasure at paying ever increasing prices for complex systems that effectively kept them from taking advantage of rapidly advancing computer technology.

Since IBM wouldn't listen, and had to be "hit on the head", by the time SAA was announced it was too much and too late. Too much had to be done at once, and it was too late to restore IBM credibility.

## Step Five—READ

Over the years, INPUT was a leading advocate of the orderly distribution of processing from mainframe computers and a leading critic of SNA. When IBMers did READ our reports, we were sometimes accused of being "too hard on IBM". In light of recent events, perhaps we were not hard enough.

It doesn't do any good to READ if you are only interested in maintaining your position. You have to go back to Step One—THINK—and get back on the same old learning treadmill if you are going to get to the top and stay there!

This lesson applies to all companies, including today's successful revolutionaries.

Another lesson that applies to those companies (like the Japanese mainframe companies) that copy the leader is to make sure your leader is going through the critical process identified above and follow the process yourselves.

In conclusion, perhaps a good motto for IBM today would be, "THINK AGAIN".

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